
Three New Species of *Psychotria* subg. *Heteropsychotria* (Rubiaceae) from Western Amazonia

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ABSTRACT. Three previously undescribed species from western Amazonia, described and illustrated here, are: *Psychotria huampamiensis* C. M. Taylor, previously confused with *P. acuminata* Benth; and *P. cenepensis* C. M. Taylor and *P. ownbeyi* Standley ex C. M. Taylor, both previously confused with *P. zevallosii* C. M. Taylor.

The pantropical genus *Psychotria* L. (Rubiaceae: Psychotrieae) comprises at least 1,000 species. It is represented in the Neotropics by at least 500 species; its representation in this region has been outlined elsewhere (Taylor & Lorence, 1992; Taylor et al., 1991).

The species described below all belong to subgenus *Heteropsychotria* Steyermark. The extensive sectional- and series-level classification that Steyermark (1972, 1974) used within this subgenus was applied only to species found in Venezuela and the Guyana Highlands. Except in a few cases, this classification cannot be extended to these new species until this group is studied in more detail throughout its range.

The following new species were discovered during review of western South American Rubiaceae for preparation of a species list for Peru (Brako & Zarucchi, 1993).

Psychotria huampamiensis C. M. Taylor, sp. nov. TYPE: Peru. Loreto: prov. Alto Amazonas, Andoas, margen izquierda del río Pastaza, Campamento OXI, 2°55'S, 76°25'W, 4 June 1981, R. Vásquez & N. Jaramillo 1896 (holotype, MO; isotypes, AMAZ not seen, USM not seen). Figure 1.

Psychotriae acuminatae Bentham similis, a qua inflorescentia spiciformi differt.

Shrubs or small trees to 6 m tall, stems to 3 cm DBH, minutely puberulent to glabrescent. Leaves paired, with blades (11)12.5–30 cm long, (3.5)6.5–13 cm wide, 1.8–2.5(3.1) times as long as wide, elliptic, at apex acuminate with slender tip (1)1.5–2 cm long, at base acute, membranaceous to thinly chartaceous, above shiny, above and below glabrescent to minutely puberulous to usually more

densely so on costa and secondary and sometimes tertiary veins, abaxially frequently with a line of pilosulous pubescence along sides of costa; secondary veins 10–16 pairs, spreading, usually looping to connect at least in distal half of blade, occasionally with shallow foveolae and frequently barbate in vein axils, with costa, secondary veins, and sometimes also tertiary venation prominulous above and below, with 1(2) weak intersecondary veins usually present between pairs of secondary veins; petioles 0.8–2.5 cm long, sparsely to moderately puberulous; stipules sparsely to densely puberulous, united around the stem into a continuous sheath 1–2(3) mm long, with lobes deltoid to triangular, (1.5)3–5 mm long, acute. Inflorescences terminal, spiciform, narrowly cylindrical; panicles 5–10 cm long, 1.5–2.5 cm wide, (2.5)3.3–6.7 times as long as wide, with flowers in open to strongly congested cymes of 3–11 on short stout lateral branches; peduncles 8–25 mm long; bracts 0.5–1.5 mm long, triangular to deltoid, acute to rounded, frequently caducous after anthesis, without bracteoles; pedicels 0–3 mm long; peduncle, axis, branches, bracts, and pedicels green, moderately and minutely puberulous; flowers with calyx green, moderately to densely puberulous, hypanthium turbinate, ca. 0.8 mm long, limb 0.5–0.6 mm long, lobed for ca. ½ its length, lobes deltoid, acute; corolla slenderly infundibular, white, externally papillose to puberulous, membranaceous, strongly bent at base and curved in tube, internally glabrous except for a densely pilose zone at the stamen attachment; tube 6 mm long; lobes 1.5–1.8 mm long, ligulate, acute, spreading to recurved at anthesis; stamens in long-styled form 1.5 mm long, included; stigmas in long-styled form slightly exerted, 0.5–0.6 mm long; disk annular or slit on one side, ca. 0.5 mm high. Infructescences similar in size and proportion to inflorescences, becoming red to red-purple; fruit 3–3.5 mm long, 5.5–6 mm wide, strongly didymous, the lobes subglobose, glabrate, blue; pyrenes smooth. Collected in flower in April, in fruit February–June, September, and November.

Habitat and distribution. In wet, usually primary forest at 125–500 m, Amazonian Colombia to northern Peru.

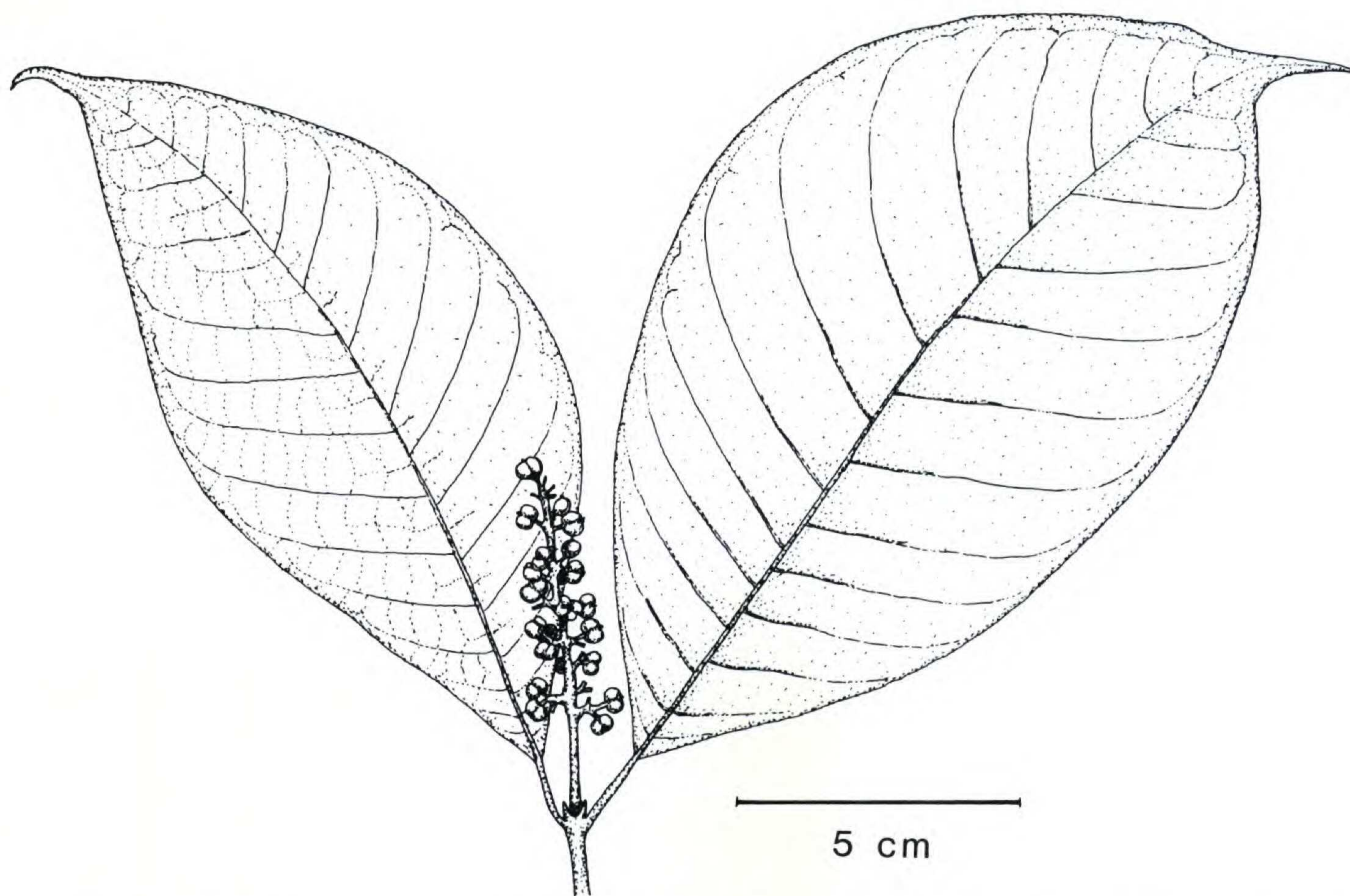


Figure 1. *Psychotria huampamiensis* C. M. Taylor, habit of fruiting plant; based on Vásquez & Jaramillo 1896 (MO).

This new species is distinguished by its thin-textured shiny leaves that are abruptly acuminate at the apex, narrow spiciform inflorescences, and strongly didymous fruits with smooth pyrenes. In leaf, floral, and fruiting characters it is similar to *Psychotria acuminata* Benth and *P. compta* Standley, with which it has been confused and with which it seems best classified in section *Didymocarpos* Steyermark. This new species is also similar in general aspect to *P. spiciflora* Standley; this last species can be distinguished by its thicker-textured leaves 3.5–10.5 cm wide that are usually not shiny, strongly thickened inflorescence axis, sessile flowers, and pyrenes with low but evident longitudinal ridges.

Berlin and collaborators report that the plant is locally called “nagkunuk,” “nánkunuk,” “shawairua kumpari,” or “skuitugken.” The specific epithet refers to their study area on the Quebrada Huampami, where this species appears to be frequent.

Paratypes. COLOMBIA. **Amazonas:** río Putumayo, carretera entre Caucayá (Puerto Leguizamo) y La Tagua, *Schultes 3742* (MO); municipio Leticia, Parque Nacional Natural Amacayacu, *Rueda 477* (COL, MO). **Caquetá:** carretera entre Puerto Rico y San Vicente del Caguán, Hacienda Las Palmas, *Cabrera 3646* (F). ECUADOR. **Napo:** Río Yasuni, ca. 60 km upriver from Nuevo Rocafuerte, *Foster 3619* (MO, S). **Pastaza:** río Curaray, alrededores de la laguna Garzayacu, 1°29'S, 76°39'W,

Neill & Palacios 6713 (MO, QCNE). PERU. **Amazonas:** Quebrada Huampami, lugar Tseasim, *Ancuash 150* (MO, USM); Quebrada Kayamas, Río Cenepa, *Ancuash 370* (MO, USM); Río Cenepa, vicinity of Huampami, ca. 5 km E of Chávez Valdivia, 4°30'S, 78°30'W, *Ancuash 1379* (F); near Shaim above Quebrada Nahim, 1 day's walk from Huampami to Río Cenepa, *Berlin 436* (MO, USM); vicinity of Quebrada Shimpunts, upper Río Cenepa, *Berlin 899* (MO, USM); valle del Río Santiago, ca. 65 km al N de Pinglo, Quebrada Caterpiza, 2–3 km atrás de la comunidad de Caterpiza, *Huashikat 1943* (MO, USM), *2314* (MO, USM); Quebrada Etsetetai, Río Cenepa, *Kayap 862* (MO, USM); Quebrada Huampami, Río Cenepa, *Kayap 899* (MO, USM). **Loreto:** Río Corrientes, upriver from Teniente López oil camp, *Gentry et al. 18958* (MO).

***Psychotria cenepensis* C. M. Taylor, sp. nov.**

TYPE: Peru. Amazonas: a 1 km de La Poza, banda este del río Santiago, 24 Aug. 1979, *V. Huashikat 178* (holotype, MO; isotype, USM not seen). Figure 2A, B.

Psychotriae zevallosii C. M. Taylor, *P. oleandrellae* (Standley) C. M. Taylor atque *P. ownbeyi* Standley ex C. M. Taylor similis, a quibus inflorescentia subsessili vagina stipularia phylla subtenta differt.

Shrubs or small trees to 5 m tall, glabrous throughout. Leaves paired, with blades 4–11.5 cm long, 1.5–3.5 cm wide, 1.6–4 times as long as wide,

elliptic to elliptic-oblong or somewhat oblanceolate, at apex acuminate with slender tip 1–1.5 cm long, at base acute, membranaceous to somewhat chartaceous, glabrous or abaxially sometimes with a line of pilosulous pubescence along the sides of the costa and secondary veins; secondary veins 11–13 pairs, spreading, curved, extending to and uniting with the cartilaginous margin, without foveolae, the costa prominulous adaxially, the costa, secondary veins, and sometimes the tertiary venation prominulous abaxially, with 1–3 intersecondary veins present between pairs of secondary veins; petioles 3–12 mm long, glabrous; stipules united around the stem into a continuous sheath 0.8–2 mm long and frequently ciliolate, with lobes 2, 0.5–3 mm long, aristate. Inflorescences terminal, densely congested, narrowly cylindrical, solitary, 1–1.5 cm long and in diameter, with ca. 3–7 flowers, sessile or with peduncles to 3 mm long, subtended by a leafless stipular sheath 2–3 mm long with 2 aristate lobes 1–3 mm long or this sometimes with rudimentary leaves to 1 cm long; bracts membranaceous to somewhat chartaceous, glabrous, yellow, the sheathing bracts 4–8, 8–12 mm long, 4–8 mm wide, oblanceolate to pandurate, truncate to rounded or auriculate at base, obtuse to rounded at apex, ciliolate, the floral bracts ca. 6–15, 8–10 mm long, 1–2 mm wide, narrowly ligulate to linear, acute at base and apex, ciliate; flowers with calyx glabrous, the limb 4.5–8 mm long, divided for half to all its length, the lobes narrowly triangular, acute, ciliolate; corollas not seen. Infructescences obovoid to hemispherical, 1–2 cm long, 2–2.5 cm wide, 0.8–0.5 times as long as wide, pale yellow; fruit 5–8 mm long, 5–9 mm wide, ellipsoid, slightly flattened laterally, orange to red; pyrenes with 4–5 longitudinal, rather sharp ridges. Collected in flower February, July, and November to December, in fruit January and July to August.

Habitat and distribution. In wet, usually primary forest at 180–300 m on the lower eastern slopes of the Cordillera del Cóndor in northern Peru.

This new species is distinguished by its leaves with relatively long slender tips and secondary veins that extend to and unite with the cartilaginous margin, small subtruncate stipules with two aristate lobes, capitate inflorescences subtended by generally leafless stipule sheaths, oblanceolate to pandurate yellow sheathing inflorescence bracts, a relatively long calyx limb, and fruit becoming orange to red. In spite of the red rather than blue-black fruit, the placement of this species in subgenus *Heteropsychotria* is supported by its persistent stipules that are biaristate and united around the stem, and green color when dry. It is not uncommon for the developing fruit of species of this subgenus to pass through a red or

orange stage before becoming blue-black, and the mature fruit of this species may not have been seen by its collectors.

This new species is similar to *Psychotria olean-drella* and *P. zevallosii* (*Cephaëlis williamsii* Standley), both of which can be distinguished by their pedunculate inflorescences that are not subtended by a leafless stipular sheath, lanceolate to ovate sheathing inflorescence bracts, and calyx limbs to 2 mm long. *Psychotria ownbeyi*, described below, is also similar but can be distinguished by its pilosulous to puberulous pubescence, glandular-fimbriate and usually bifurcate to multifid stipular lobes, inflorescences not subtended by a leafless stipular sheath, and smooth pyrenes. *Psychotria cenepensis* has been confused with *P. flaviflora* (K. Krause) C. M. Taylor (*Cephaëlis flaviflora* K. Krause), which has pedunculate inflorescences that are not subtended by a leafless extra stipular sheath and rounded to deltoid stipules that lack well-developed aristae.

Berlin and his colleagues report that this plant is locally called “samikua,” but has no practical use. The specific epithet refers to their study area on the Río Cenepa, where this species appears to be frequent.

Paratypes. PERU. **Amazonas:** Quebrada Wampusik entsa, *Ancuash* 734 (MO, USM); Río Cenepa, vicinity of Huampami, ca. 5 km E of Chávez Valdivia, 4°30'S, 78°30'W, al lado de Padre Carlos, parte de Kayamas entsa, *Ancuash* 1058 (F, MO, USM), 1253 (MO, USM), *Kujikat* 52 (MO, USM); between Cenepa and Kayamas, *Berlin* 515 (F, MO, USM); trail above Quebrada Cikanicito Shimpuntz, W of Huampami, *Berlin* 623 (MO, USM); S of Aintami Creek, E of Río Cenepa, *Berlin* 1583 (F, MO, USM); S of Huampami, trail to house of Theodora, S of Río Cenepa, *Berlin* 1667 (F, MO, USM); Mobil Oil Co. trail, 2–3 km from La Poza, E bank of Santiago River, *Berlin* 3507 (MO, USM), *Leveau* 94 (MO); next to Río Cenepa above mouth of Quebrada Huampami, *Kayap* 44 (F, MO); frente a la comunidad de Galilea, banda este del río Santiago, *Huashikat* 64 (F, MO), *Leveau* 220 (MO); camino de Jutui entsa, *Kayap* 1376 (F, MO, USM); atrás de la casa de Jaime Braga, banda este, río Santiago, *Leveau* 67 (MO).

Psychotria ownbeyi Standley ex C. M. Taylor, sp. nov. TYPE: Ecuador. Napo: Cantón Archidona, S slopes of Volcán Sumaco, 4 km N of Huahua Sumaco community near Río Huataraco, 00°43'S, 77°32'W, 13 Dec. 1989, *D. Neill, A. Alvarado & F. Hurtado* 9164 (holotype, MO; isotype, QCNE not seen). Figure 2C, D.

Psychotriae cenepensis C. M. Taylor similis, a qua foliorum minorum apicibus brevioribus, stipulis glandulari-fimbriati setiam inflorescentia vagina stipulari aphylla non subtenta differt.

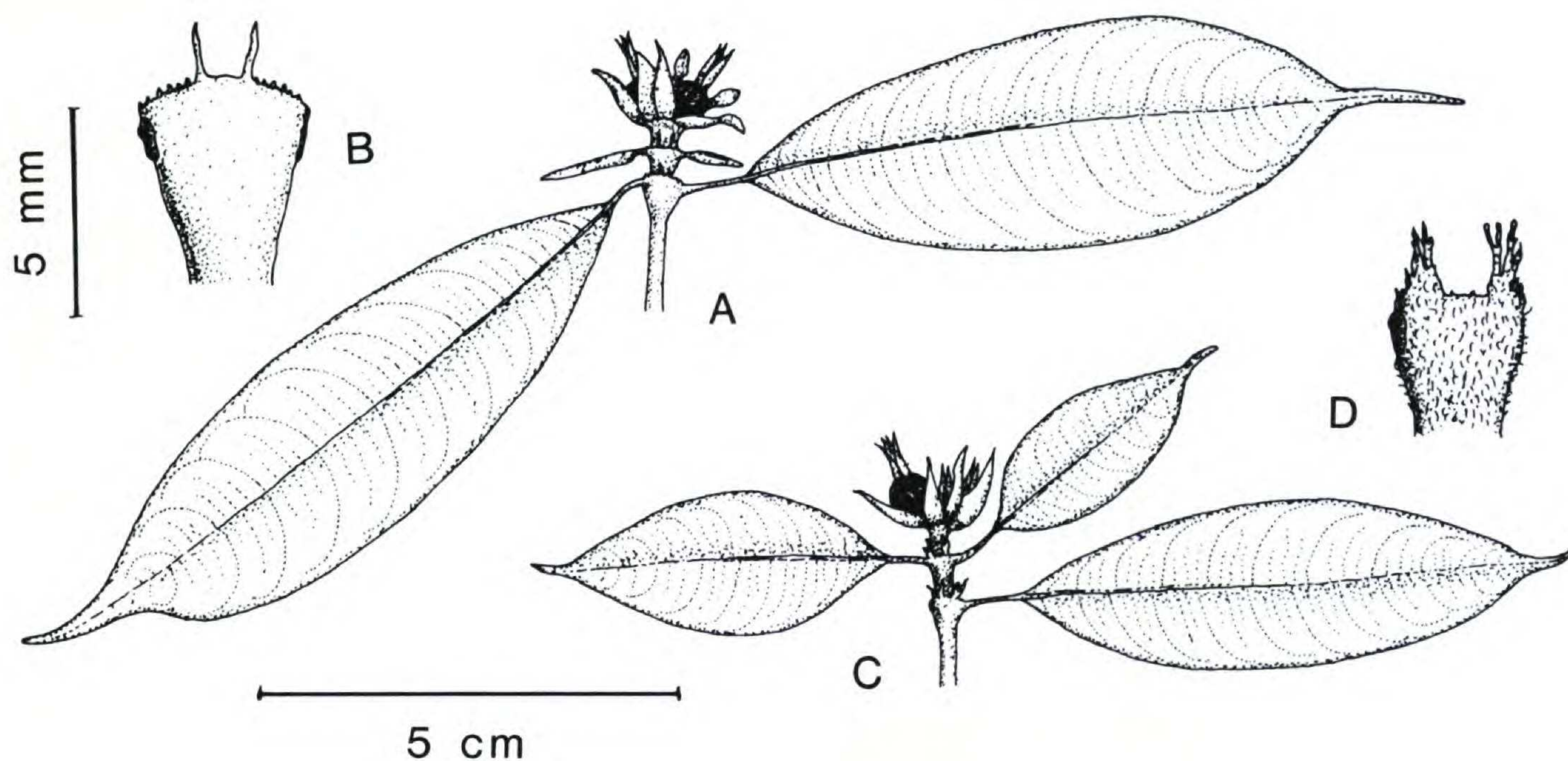


Figure 2. A, B, *Psychotria cenepensis* C. M. Taylor. —A. Habit of fruiting plant; based on *Berlin 1583* (MO). —B. Stipule; based on *Ancuash 1058* (MO). C, D, *Psychotria ownbeyi* Standley ex C. M. Taylor; based on *Flynn et al. 4016* (MO). —C. Habit of fruiting plant. —D. Stipule. A, C to 5-cm scale; B, D to 5-mm scale.

Shrubs or small trees to 5 m tall, stems puberulous to pilosulous. Leaves paired, with blades 3.5–11 cm long, 1.3–3.6 cm wide, 2.1–4 times as long as wide, narrowly elliptic to elliptic-oblong, at apex acute or sometimes acuminate with the tip ca. 5 mm long, at base acute to cuneate, chartaceous, glabrescent or frequently pilosulous abaxially and the costa and secondary veins usually pilosulous at least abaxially; secondary veins 10–23 pairs, spreading, broadly curved, extending to and uniting with the cartilaginous margin, without foveolae, the costa prominulous abaxially and sometimes also adaxially, the secondary veins smooth or occasionally thickened abaxially, with 3–7 intersecondary veins present between pairs of secondary veins, with 1–3 of these well developed and resembling secondary veins but not extending to margin; petioles 2–9 mm long, pilosulous; stipules puberulous to pilosulous, united around the stem into a continuous sheath 1–3 mm long and ciliolate and frequently slightly to densely fimbriate, with lobes 2, 1–2 mm long, narrowly triangular to linear, usually bifurcate to multifid for ca. half their length, sparsely to densely fimbriate, with fimbriae 0.5–23 mm long, usually glandular at apex. Inflorescences terminal, densely congested, ovoid to narrowly cylindrical, solitary, 9–15 mm long, 8–10 mm diam., 1.1–1.5 times as long as wide, with ca. 3–5 flowers, with stout peduncles 1–4 mm long, the subtending stipular sheath usually relatively longer than the vegetative ones though bearing leaf blades generally similar in size to those of vegetative nodes; bracts 6–10, charta-

ceous, pilosulous, pale green to white, cream, or pale yellow, 6.5–12 mm long, 3–5 mm wide, lanceolate to somewhat pandurate, acute at apex, ciliate; flowers with calyx puberulous to pilosulous, the limb 5–6 mm long, divided for ca. half its length, the lobes very narrowly triangular, acute, ciliolate; corollas white to cream, funnelform, glabrous, the tube 6–10 mm long, the lobes 1.2–2 mm long, triangular, entire or sometimes with an apical knobbed appendage ca. 0.5 mm long. Infructescences similar to inflorescences; fruit 3–5 mm long, 4.5–6 mm wide, ellipsoid to ovoid, flattened laterally, red-orange becoming black; pyrenes smooth. Collected in flower September to January, in fruit March, May, June, October, and December.

Habitat and distribution. Locally frequent at 400–1,400 m in wet primary forest of the western Amazon basin from Ecuador and adjacent Colombia to northern Peru.

This new species is distinguished by its leaves with secondary veins that extend to and unite with the cartilaginous margin, small stipules with glandular-fimbriate and frequently bifurcate lobes, relatively long calyx limb, smooth pyrenes, and puberulous to pilosulous pubescence on all parts. It is similar to *Psychotria cenepensis*; their distinctions are summarized under that species, above.

Flowering branches bear generally smaller leaves with fewer secondary veins and less densely fimbriate stipular lobes than non-flowering branches.

Standley (in herb.) proposed the specific epithet

in honor of Marion Ownbey, who collected some of the first material of this species. However, he never published this name.

Paratypes. COLOMBIA. **Putumayo:** márgenes del río Guamés 4 km al S de San Antonio del Guamés, *Foster 1545* (F). ECUADOR. **Morona-Santiago:** Río Encanto near junction with the Río Pastaza, *Steere & Camp 8237* (F). **Napo:** Cantón Tena, Estación Biológica Jatun Sacha, ca. 8 km ESE of Puerto Misahuallí, 1°04'S, 77°37'W, *Cerón 622* (MO), *Cerón & Igaugo 5542* (MO), *Cerón & Montesdeoca 8010* (MO), *Flynn et al. 4016* (F, MO, QCNE), *Miller et al. 2242* (MO), *Palacios & Neill 916* (MO, QCNE), *Palacios 3278* (MO), *Stein & Suárez 3040* (MO); Río Napo, 2 km río abajo de Campana Cocha, boca del Río Huambuno, 1°01'S, 77°30'W, *Neill & Marles 6999* (MO, QCNE); Cantón Archidona, faldas al sur del Volcán Sumaco, comuna Huahua Sumaco, Km 50 de la carretera Hollín-Loreto, 0°43'S, 77°34'W, *Hurtado et al. 2100* (MO, QCNE), Km 45, 0°44'S, 77°35'W, *Hurtado et al. 2779* (MO, QCNE); ridge NW of crossing of Río Shitiyacu on trail from Archidona to headwaters of Río Tena, *Ownbey 2727* (F, MO); vía Hollín-Loreto, a 3 km después del río Hollín, 00°52'S, 77°43'W, *Palacios 3849* (MO, QCNE); Cantón El Chaco, Río Granadillo, campamento de INECEL "Codo Alto," 00°08'S, 77°28'W, *Palacios 5551* (MO, QCNE). **Pastaza:** Cantón Pastaza, pozo petrolero "Moretecocha" de Arco, 75 km al este de Puyo, 1°34'S, 77°25'W, *Gudiño et al. 989* (MO), *1153* (MO); Mera, *Harling et al. 10132* (MO). **Zamora-Chinchipe:** Cantón Nangaritza, Río Nangaritza, Miazí, 4°18'S, 78°40'W, *Neill 9641* (MO, QCNE). PERU.

Cuzco: Prov. Quizpichanchi, Camanti, Miniri, en el cerro Caminti, 13°17'S, 70°48'W, *Timaná 1070* (CUZ, MO).

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